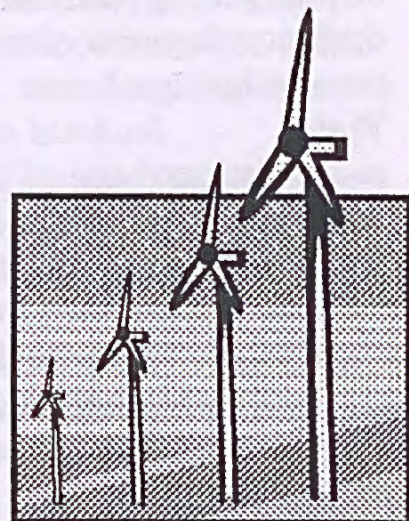


The Ballarat Naturalist

December 2003



Sustainable Living

Speaker: Dr. Alan Ford, Ballarat Grammar School

Towards the end of 2002 Alan spent 11 weeks overseas, mostly in the UK but also in Germany, as the recipient of a Churchill Fellowship. He has been deeply involved in the development of the syllabus at the Heinz Centre at Grammar where Year 9 students spend the full year involved in an integrated program of study, practical work and system maintenance of the energy efficient building (see Newsletter July 2002). Alan inspected the sites of a number of alternative technologies with the emphasis on sustainable/renewable energy. He is now looking to incorporate the concepts into his current work, and his own experience of growing up on a farm is a great asset.

Alan began his talk by emphasising the wastefulness of our society and its lack of sustainability. Through their year in the Heinz Centre students are exposed to both the problems we are causing and the possible solutions. Six factors are involved, namely:

- Energy
- Water
- Plants
- Animals
- Resources
- Air.

Through experiential living students would realise that we should fit in with the environment instead of trying to dominate it—we cannot separate ourselves from it.

Energy Students understand the history of energy development such as steam and fossil fuels; they document their personal energy uses and are introduced to problems such as acid rain and greenhouse gases, nuclear plants and their difficulties. They investigate alternative sources—and here Alan showed us illustrations of projects seen in Wales and England including solar cells, wind, hydro, biogas and woodlots. He

mentioned tidal and wave power, and vegetable oils as automotive fuel. Reduction of energy use can come from passive means demonstrated in the Heinz Centre such as double glazing, thermal mass, north-facing windows, eaves of the appropriate size, draft proofing, use of natural light, compact light globes, and so on. Students spend time designing a house.

Water Students measure personal use and produce charts and graphs (leading to sophisticated use of spreadsheets) while understanding the recycling and sewage treatment system of the Heinz Centre involving worm farms, use of ponds and reed-beds and electroflocculation. In this way 75% of water is saved. An understanding of the water cycle results from such studies. Students help clean up Yarrowee Creek, and visit Queenscliff to see the downstream impacts of water usage. Water conservation is practised by having sensors on washbasin taps which turn off the flow.

Air A Stevenson screen houses weather recording instruments which are monitored.

Plants The Centre runs an organic garden with composting, and students from urban backgrounds realise where their food comes from!

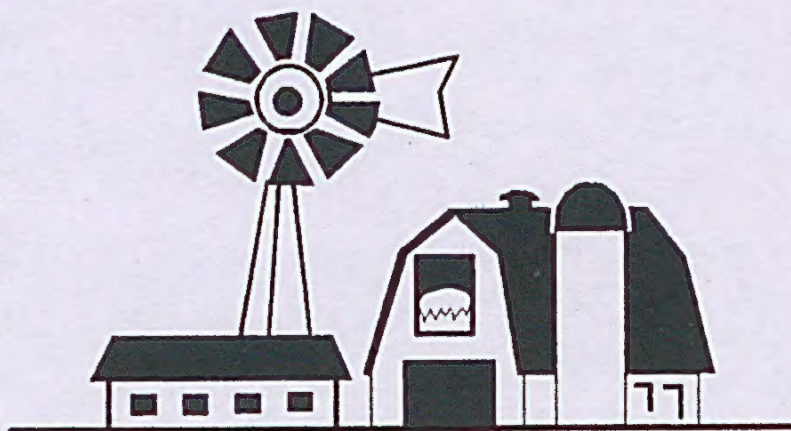
Animals Hens are kept, introducing students to animal husbandry and the flow-on effects of caring for living things.

Resources Re-use, reduce, repair! Students learn that resources like crude oil, from which we get our plastics, are finite. Sustainable alternatives need to be found and the current built-in obsolescence mentality eradicated. This does not mean that our standard of living needs to fall, rather that with good management it can be maintained.

History, Geography, Maths and Science, Social Science and English, Information Technology, even other languages, are all covered—by stealth, as Alan put it—in these integrated studies. The teachers themselves need a broad approach with good general knowledge. Alan's own enthusiasm spoke volumes.

He discussed several of the pros and cons associated with the adoption of these ideas in our lifestyles. He mentioned the difficulties with bureaucracies in developing some of the concepts and said that Australia was 10 years behind Europe in its thinking! The audience commiserated with him over the lack of sustainability in such new suburbs as Caroline Springs.

It will be very interesting to see what impact the Year 9 experience has on those students; to see what their jobs might be in 10 or 20 years' time and what changes they might make to their lifestyles as a result of their direct experience. Alan's talk certainly gave his audience considerable food for thought.



November Meeting Points

40 members and visitors were welcomed.

- Angahook-Otway Investigation Discussion Paper Summary: That a submission be sent to VEAC to support expansion of reserves in the Angahook-Otway area. Moved Ken Hammond, seconded Pat Murphy. Carried.
- Lake Burrumbeet Advisory Committee: John Gregurke attended a recent meeting and reported that the Masterplan will be presented at a public meeting soon. Field Naturalists' Club of Ballarat representation would be welcome at future LBAC meetings.
- Club Campout at Stuart Mill: Accommodation was in new, comfortable and well-insulated mud-brick units. Excursions were to a variety of sites in the Box-Ironbark forests. 10 members took part.
- VFNCA Spring Campout: Interesting program of speakers and excursions organised by Portland FNC. 8 Ballarat members attended. VFNCA to change name to South East Australian Naturalists Association and become incorporated.

Show and Tell.

- Lyndsay Fink: Photographs of Redan Wetland before and after rain.

Field Reports

- Greg Binns: Along Creswick Creek near Clunes Caravan Park two Platypus have been seen in late afternoon.
- John Gregurke: Ten Latham's Snipe in grass surrounding Paul's Wetland.
- Patrick Guay: 10 clutches of cygnets and 5 active nests of Black Swan at Lake Wendouree. One nest in Lake Gardens. 2 Red-necked Avocet on Lake Wendouree.
- Les Hanrahan: Swarms of small winged ants at Bungaree.
- Eileen Anderson: Swarm of bees hanging in tree at Fairyland, Lake Wendouree, but disappeared a few minutes later.
- Kay Preston: Purple Swamphen feeding young with a reed.
- Ken Hammond: A flying Little Pied Cormorant was carrying a stick at Lake Wendouree. Was it nest building? Rufous Whistler, Golden Whistler and Sacred Kingfisher at Creswick.
- John Mildren: 3 White-winged Choughs were harassing a large frog which disappeared into oxalis. Choughs spent a while unsuccessfully searching for the frog.
- Avis Barlow: Frogs calling in dam at Ballarat East.
- Helen Burgess: Two Common Bronzewing at Ballarat North. First sighting for several years.

Excursion to Linton: Peter and Pat Thompson's Block and TFN Block

Sixteen members travelled to Linton for our November excursion. Cool cloudy conditions prevailed for most of the day. On arrival at the Thompson's block we were invited into their very comfortable mudbrick residence. Peter then gave us a brief history of the block which they purchased in 1976 - 80 acres of degraded marginal farmland is now in 2003 a very pleasant retreat from the stresses of city living.

We were shown aerial photos taken of the block over a period of years. It was interesting to see how quickly the landscape improved with the removal of stock and rabbits. Peter explained that initially some plants which were not indigenous to the area were introduced but in later years there had been good regeneration of the native remnant species. We were given a conducted tour of the property by the owners and it was obvious that they were well pleased with what they, their children and grandchildren had achieved over the last 27 years.

Land for Wildlife status was conferred in 1982, and with assistance from Trust for Nature a permanent covenant was registered on the land title to protect forever the diverse wildlife habitat that now covers the block.

With no sheep, cattle or rabbits to contend with, much of the native flora is now thriving: Running Postman, Love Creeper, Twining Fringe Lily, Rice Flower *Pimelea humilis*, Leopard Orchid *D. maculata*, Wallflower Orchid *D. longifolia*, Waxlip, Pink Fingers *Petalochilus carneus*, Stinking Pennywort *Hydrocotyle laxiflora* were in bloom amid Rough-barked Manna Gum, Messmate Stringybark with Black Wattle and Black She-oak scattered over the block.

Just a few birds were seen, the overcast conditions not the best for bird watching. Sulphur-crested Cockatoo, Long-billed Corella, Pallid Cuckoo, Striated Pardalote, White-throated Treecreeper, New Holland Honeyeater, White-naped Honeyeater were some of the birds seen or heard. One Blue-tongued Lizard was seen and allowed to go on its way after being checked over for ticks. Black (Swamp) Wallabies were seen and frogs ("Pobblebunks") were calling loudly from a secluded dam with lots of frogspawn evident.

Thanks to the Thompson family for sharing their property with us for half a day. It was very much appreciated by the members who attended.

After lunch we moved to the Linton Trust for Nature Block; again birds were hard to find. Scarlet Robin, Yellow-faced Honeyeater, Buff-rumped Thornbill, Grey Thrush, Striated Pardalote, Grey Currawong were some of the birds observed.

Flora was more abundant and also more easily observed but hard on the knees at times! Nodding Greenhood, Wallflower Orchid, Waxlip, Spotted Sun Orchid *Thelymitra ixiodes*, Western Bronzewood *Stegostyla iridescens* (*Caladenia iridescens*) Pink Fingers, Tiny Pink Fingers *Petalochilus pusillus* (*Caladenia pusilla*) Bulbine Lily, Grey Parrot-pea *Dillwynia cinerascens*, Showy Parrot-pea *Dillwynia sericea*, Narrow-leaf Bitter-pea *Daviesia corymbosa*, Creeping Bossiaea *B. prostrata*, Common Flat-pea *Platylobium obtusangulum*, Pink Bells *Tetralthea ciliata*, Scaly Buttons *Leptorhynchus* sp. and Yam Daisy were some of the plants recorded.

A few members returned to Ballarat via Devil's Kitchen to see if the Peregrine Falcons were breeding this year. One adult was at the nest site, presumed to be the female; after much discussion and peering through telescope and binoculars there appeared to be two chicks. After a short while the adult bird flew off and a third chick was visible. A Brown Falcon was also seen in the area. Thanks to Carol, Kay and John, our leaders for the day: a most enjoyable day out.

Ken Hammond.



Peregrine Falcon

(Thanks to Pat Murphy for the updated list of scientific names for some of the orchids. Ed.)

NB. A quick look at Nimons Bridge on the way home revealed the newly restored Rail Trail facility—the bridge itself can now be traversed. Also of interest was a partly completed straw bale house nearby, providing some interest after Alan Ford's talk two days' earlier.

VFNCA Campout at Cape Bridgewater 10-12 October

Hosted by Portland FNC



Australasian Gannet

Eight members attended the camp at the Cape Bridgewater Camp and Convention Centre. Excursions included visits to Fawthrop Lagoon and the gannet colony at Point Danger where we were permitted inside the electric (fox-proof) fence for a closer look at the birds which had outgrown their original colony on Lawrence Rocks. A wander along the Sea Cliff Nature Walk revealed Hare Orchids, Swamp Diuris and Leopard Orchids. Mt. Richmond was a veritable garden with a great variety of wildflowers blooming; the Bridgewater Lakes of-

ferred yet more variety of landscape. A 5km walk around the perimeter of Cape Bridgewater allowed members to see the Petrified Forest and look down on the seal colony; however stormy seas prevented an excursion in a Zodiac to view the colony from the water.

Evening sessions were most informative; Ivor Graney is not only extremely knowledgeable about frogs of SW Victoria but is a most competent photographer. The former proprietor of a local B & B gave us a readily understood explanation of the Cape's geology, and another local member showed us wildlife and flora of the area.

As usual the camp provided an opportunity to catch up with members from other parts of the state, and for the VFNCA to hold its general meeting. The decision was made to re-name the organisation SEANA (South East Australian Naturalists Association) to avoid confusion with FNCV and to acknowledge the membership of clubs from Albury-Wodonga and Mt. Gambier.

Ed.



Hardwoods and Softwoods

Extract from *The Age Weekender*:

How did these names come about? Balsa is said to be a hardwood but to the touch is extremely soft; and the softwood Australian cypress is actually very hard.

Generally speaking, softwoods are older and more "primitive" from an evolutionary point of view. They usually keep their leaves year round. Hardwoods are flowering plants that produce seeds in a ripening fruit such as a gumnut or apple and may lose their leaves in winter.

Where the two differ mostly is in matters of "sex" and "cell tissue". First, the sex. The softwood trees (gymnosperms) are "primitive" about this; their sex organs are on little cones (hence *conifers*) and the pollen is blown from one tree to another by the wind. Reproduction for hardwood trees involves insects or other creatures such as birds, carrying the pollen from a flower on one tree to a flower on another. In general the softwoods don't have flowers.

As for the second main difference: hardwoods have structures called "vessels", while softwoods do not. You can see the cross-section of a vessel if you make a clean cut to the end of a hardwood timber with a sharp blade, and use a x10 or x20 hand lens. Vessels are also called "pores", and in the timber trade hardwood is often called "pored timber" while softwood is called "non-pored timber". Today, about 20% of the lumber produced worldwide is hardwood (including eucalypt, teak, oak, walnut, maple, willow, poplar and beech) and 80% is softwood (including longleaf pine, Douglas fir, radiata pine, slash pine and yew).

Change of Speaker

Owing to conference commitments Dr. Jan Watson, who was to address us in February and lead an excursion, will now speak to us in April.

More on the High Country after the January Fires

The October 2003 issue of *The Victorian Naturalist* discusses the impact of the fires on the Bogong High Plains. The author, David Cheal, visited the area just after the fires had passed in February and recorded his first impressions.

The upper slopes were severely burnt due to the steep slopes and high fuel loads of the Alpine Ash *E. delegatensis*. About 20% of this forest was unburnt and a further 30% burnt only in the lower strata. In the High Plains this was the first fire since the 1930s. Some areas were severely burnt, others completely unburnt.

Factors affecting the likelihood of being burnt included **fuel quantity**, so that shrubby areas burnt more than grasslands. Snowgum-dominated areas were more readily burnt, and in higher intensity fires than surrounding treeless vegetation. **Fuel type:** Even bogs burnt, so dry a season had it been. Peatbogs were still smouldering a fortnight after the firefront passed. **Slopes:** steeper slopes were more likely to burn than flatter areas. Protected exposures such as south-facing slopes were less likely to burn due to higher moisture levels. **Fire conditions:** the nature of the firefront and the time that it hit most determined whether a site was burnt and how intense that fire was. In evenings when temperatures and wind speeds were lower the fire was patchy and did not burn bogs. But in the middle of the day all vegetation could be burnt. Chance played a major role.

The article goes on to discuss regeneration in various plant communities and draws some conclusions from the observations made.

Calendar

December

- Fri. 5 Dr. Chris Williams *Importance of Conservation on Private Land*.
Sun. 7 Excursion: Eynesbury; Leader John Gregurke. **DEPART 8.30 am**
Sat. 13 BBQ Lunch at Lyndsay's, 12 noon BYO everything.

January 2004

- Tues. 27 Committee Meeting @ Maureen's 7.30pm

Feb.

- Fri. 6 Kate Blood (DPI Beaufort) Project Leader "Weed Alert Rapid Response".
Topic: *Garden Plants as Invasive Weeds in Bushland*. (Change of Speaker).
Sun. 8 Excursion: TBA.

Supper Duty:

December: Volunteers required.
February: Volunteers required.

Committee

President Mrs. Carol Hall
Vice-President Mr. Greg Binns
Secretary Mr. John Gregurke
Treasurer Mr. Bob Curtain

Miss Helen Burgess.....
Miss Maureen Christie.....
Mrs. Claire Dalman.....
Mrs. Carol Hall (Editor)....

Miss Fran Hanrahan.....
Mr. Les Hanrahan.....
Mrs. Kay Preston.....

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Editor:

Website: www.ballarat.yourguide.com.au Click on *Local Info*. Search *Environment*.

Meetings are held at the Ballarat Horticultural Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

Excursions: Depart from Ballarat Market Place (formerly Creswick Plaza) Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30 am unless otherwise specified.

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